Morecambe Bay Academy

Parental Evening

Year 11: Revision Support

January 2024

morecambebayacademy.co.uk

Academic Support

Year 11 Online Revision Resources

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Supporting with revision

- Planning is key
- Timetables can support this
- Organisation will save
- Small and realistic targets
- Time frames keep you efficient
- Rewards to keep motivation high

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Supporting with revision

- Different places work for different people
- A tidy study space is important
- Exams are stressful
- Keep mental health in mind

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Revision Timetable

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
7.00 – 8.00						WORK	
8.00 – 9.00							
9.00 – 10.00	MATHS		BIOLOGY		BIOLOGY		
10.00 – 11.00	BIOLOGY	HISTORY		HISTORY	MATHS		
	BREAK						
11.20 – 12.20			MATHS		HISTORY		
12.20 – 1.25	LUNCH						
1.25 – 2.25	MATHS	BIOLOGY	HISTORY				
2.30 – 3.30	HISTORY			BIOLOGY			
3.30 – 5.00							
5.00 – 6.00							
6.00 – 7.00							
7.00 – 8.00							
8.00 – 9.00							
9.00 – 10.00							
10.00 – 11.00							

Lessons in red

Independent study: each subject with its own colour.

- Note that there is no late-night work going on here!!
- **Planning ahead is a way of avoiding the build-up of stress**
- Sleep is important: no-one will benefit form working late into the night. You need time to rest and to wind down, as well as spend time with family and friends.

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Revision Cards

- Made by some students last year.

Glacial env.s - high altitudes + latitudes

↳ permanetly covered by ice (glaciers / ice sheets).

Glaciers = ice masses that flow downhill.

Ice sheets = domes of ice covering huge areas of land.

. High latitudes = v. cold e.g. Antartic ice sheet (southern hemisphere) + Greenland Ice sheet (North) - both above 60° latitude. High altitudes e.g. Himalayas (highest mountain range in world)

- even though it can be v. cold on low altitude land in middle of continent, there's not enough snow to form glaciers.

CHEMISTRY - ENTROPY

ENTROPY = measure of disorder of a substance

- entropy change ΔS = $\sum$ entropy of products − $\sum$ entropy of reactants
- higher entropy = bigger ΔS

entropy gas > entropy liquid > entropy solid

measured in $JK^{-1}mol^{-1}$

[16 marks]

Describe and evaluate the cognitive approach in psychology.

- Internal process should be studied: study is indirect, and uses inference.
- Uses models, e.g. multi-store model, or computer models (CPU, coding).
- Schema as mental frameworks to store world knowledge - born with motor schema, develops throughout life. Enable processing lots of information quickly, prevents being overwhelmed by stimuli.

✓ Uses mainly lab experiments - high control and scientific rigor. ✗ Comparison to computers = machine reductionism. ✗ Tests are carried out using artificial stimuli - low external validity. ✓ Real life application to A.I. with computer processing based on human processing - may revolutionise future living. ✗ Recognises internal processing precedes response to stimuli, but we operate within the realm of our own knowledge - interactionist/soft determinism. ✗ Schemas can lead to misinterpretation of events.

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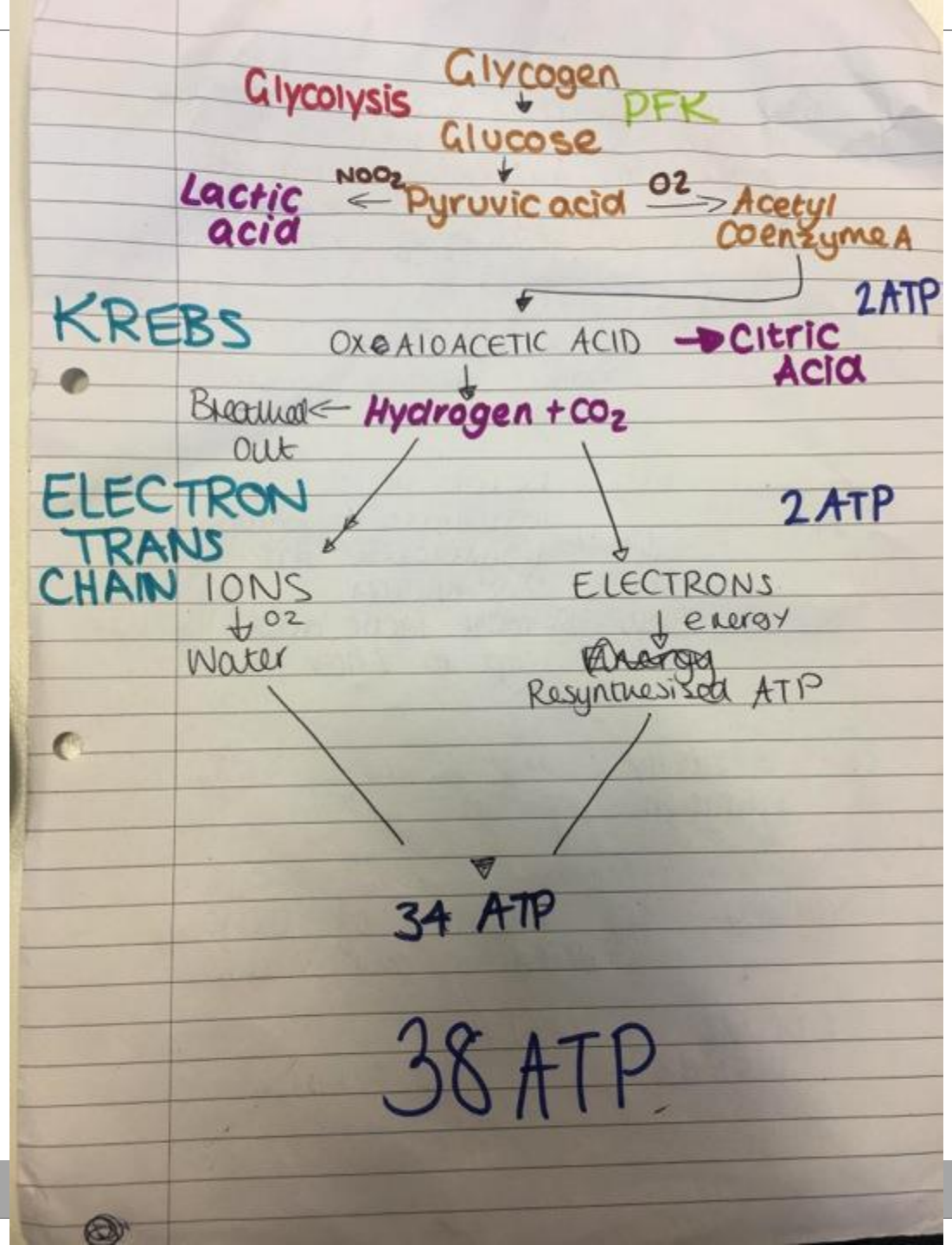
Mindmaps

For some topics it will be more useful to make a mindmap or a poster so that you can see how things connect:


Glycolysis
Glycogen
Glucose
PFK
Lactic acid
NOO2
Pyruvic acid
O2
Acetyl Coenzyme A
2ATP
KREBS
OXALOACETIC ACID
Citric Acid
Hydrogen + CO2
Breathed out
ELECTRON TRANS CHAIN
2 ATP
IONS
O2
Water
ELECTRONS
energy
Resynthesised ATP
34 ATP
38 ATP

MATERIALS

Density

→ Density is mass per unit volume:

$$\rho = \frac{m}{V}$$

→ Units: kgm^{-3}

→ Water has a density of $1000 kgm^{-3}$ or $1 gcm^{-3}$

→ The density of an object determines

Hooke's law

→ Hooke's law says that the extension of a stretched object, ΔL, is proportional to the force being applied:

$$F = k\Delta L$$

where k is the stiffness constant of the material being stretched

→ Springs also obeys Hooke's law, but k is then called the spring constant

→ It works for both compressive and tensile forces. For springs, k remains the same.

→ Hooke's law is also obeyed by most materials up to a point.

Types of deformation

Elastic

→ The material returns to its original shape + size once force is removed

→ When the material is pulled apart, the atoms are pulled apart from one another

→ The atoms move small distances relative to their equilibrium positions without changing position in the material

→ Load removed - return to eq. position

→ This happens as long as elastic limit isn't reached.

Plastic

→ Material is permanently deformed

→ Atoms move position relative to one another

→ Load removed - they don't return to original position

→ Takes place when materials are stretched past elastic limit

Energy conservation

→ When material is stretched, work is done:

$$W = \frac{1}{2} F \times \Delta L \quad (F \text{ not constant})$$

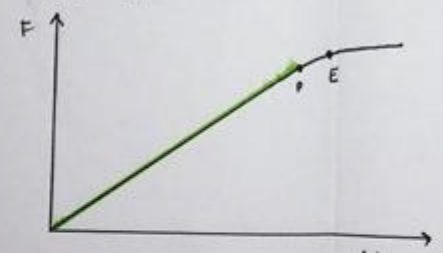
→ In elastic deformation, this is stored as elastic strain energy

$$E = \frac{1}{2} F \Delta L = \frac{1}{2} k \Delta L^2$$

→ Once the load is removed, this is transferred to other forms

→ In plastic deformation, work is done to seperate atoms, and energy is mostly lost as heat.

→ There is a limit to the force that can be applied for Hooke's law to stay true.



→ The graph shows F-ΔL for a typical metal wire

→ The first part shows Hooke's law being obeyed (direct relationship)

→ P is the limit of proportionality

→ E is the elastic limit (permanently stretched)

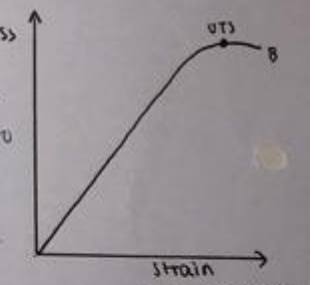
Stress and strain

→ Tensile stress is the force applied divided by the cross sectional area: $stress = \frac{F}{A}$

→ Units: Nm^{-2} or Pa

→ Strain is the ratio between extension and original length

$$strain = \frac{\Delta L}{L}$$



→ The effect of the stress is to pull the atoms apart from one another

→ Eventually stress causes the atoms to seperate completely. This is the breaking stress (B)

→ UTS (ultimate tensile stress) is the max stress a material can withstand

→ UTS and B both depend on the temperature of the material

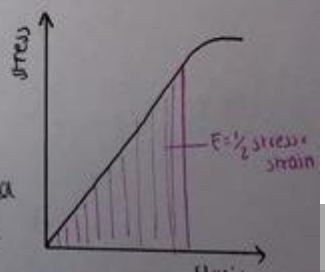
Young modulus

→ Up to the limit of proportionality, stress ∝ strain, so gradient = constant

→ This constant, E is the Young modulus

$$E = \frac{stress}{strain} = \frac{FL}{\Delta L A}$$

→ In a stress-strain graph, E=gradient and area = elastic strain energy per unit volume



- Our most "successful" students are:

- **Well organised**: they are busy and often enjoy a range of activities out of school as well as keeping up to date with academic work.
- Counting the number of hours of study to get a **balance across subjects**.
- Effectively using their **independent study time**: they see homework as the baseline minimum and they do more.
- **Revising as they go** along and producing materials to support this.
- Often doing **optional 'extra' tasks** (interventions).

- They are accessing materials, for example from GCSE pod or online textbooks, to help go over understanding from lessons and **enrich** their own learning.
- **Using frequent assessment**, as a tool to **appraise their own learning,** and plan their revision.
- Overcoming barriers to learning in a practical way and **seeking support** to do this.

- Students who are "struggling" tend to be:

- Completing homework, especially if it will be marked by the teacher, but not doing the amount of independent study we expect.
- Struggling to get into a **good routine** of work in and out of school.
- Stressed out by on-the-spot tests and planned exams. They are **unprepared**.
- Feeling like they have a lot of time on their hands! They are less busy, in and out of school, and this can lead to a lack of motivation and sometimes poor mental health.

Student Support

- Careers Advisor
- School Counsellors
- School Nurse
- Group support sessions with external agencies.

These are confidential services. We can signpost students to the right support.

The Pastoral Team will not know about the content of any conversations unless there are safeguarding concerns.

Students may access these services without your knowledge.

Wellbeing

- Student Health and Wellbeing is a main priority at MBA, we want all our students to be happy and involved and to know they are supported by staff and by their peers.
- A work routine is an important part of student wellbeing alleviating stress and setting boundaries to work hours.
- All students are encouraged to join extra curricular activities to establish habits that allow them to take time out from their studies and promote a positive way of relaxing that will support them in adult life.

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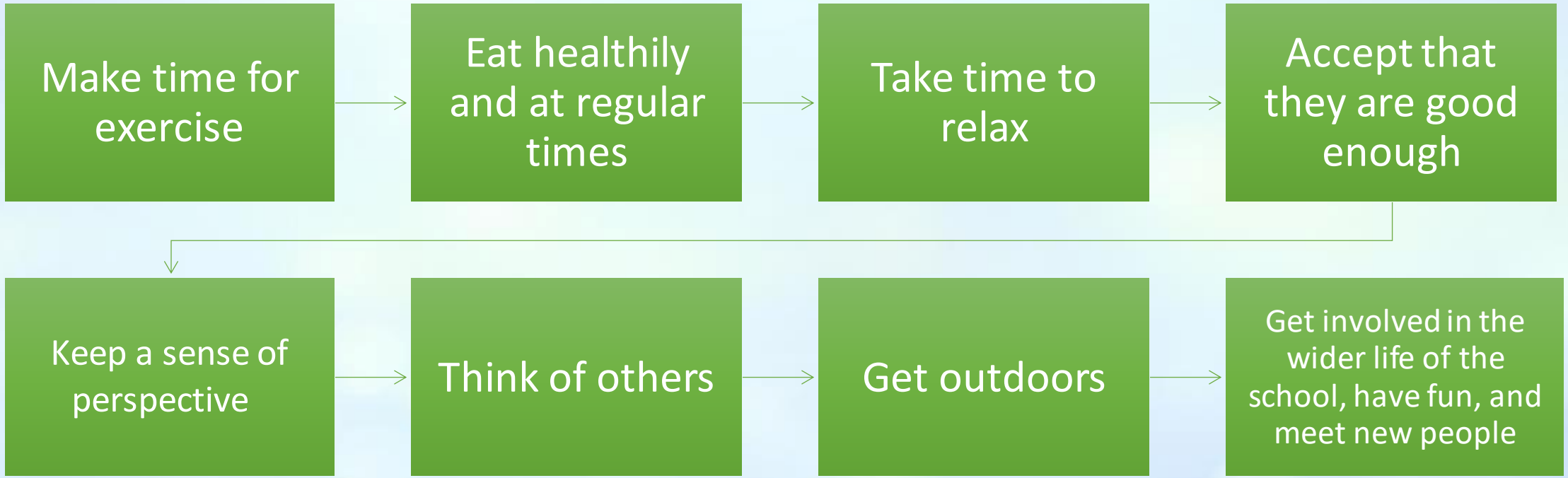
Healthy habits for life



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Support for Families

There are excellent resources from Young Minds to support parents to support their children

https://www.youngminds.org.uk/parent/parents-a-z-mental-health-guide/exam-time/

Keeping our students well and happy is undoubtedly the most important aspect of our jobs. If you have any concerns, please do discuss them with the Head of Year. You know your children the best and we are here to support their personal development.

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Safeguarding

- Ms Pardoe is the strategic lead for safeguarding.
- She can be contacted directly if you have any worries or concerns.

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Sixth Form at MBA

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Key Sixth Form Dates

- Taster Day 1st February
- Applications close 9th February
- Induction Day 26th June
- GCSE results day/enrolment 22nd August

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University Destinations

Durham – Archaeology, Sport and English Literature

Leeds - Psychology

Nottingham Trent - Architecture

York – Criminology, Photography

Hull - Marine Biology

Lancaster – Law, Chemistry, Biomedical Science, Fine Art

Sheffield – Philosophy

Swansea – Graphic Communication

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Apprenticeship Destinations

EDF

BAE

United utilities

Bowker's Electrical

Lancaster City Council

Royal Air Force

Lancashire Police

Other Destinations

Aspiring to be a professional football referee.

Secured a Law apprenticeship in a local Lancaster Law firm.

https://www.lancasterguardian.co.uk/news/morecambe-clothing-designer-gets-showcase-at-london-fashion-week-4210687

At MBA Sixth Form students have the confidence to be who they want to be and are supported to find their way in the world.

16, 17 and 18

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Further questions

Members of SLT are available if you have any questions.

Thank you for attending.